

LEPIDOPTERA COLLECTED BY OSCAR NEUMANN IN
NORTH-EAST AFRICA.

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(Continued from vol. x. p. 542.)

SATYRINAE.

70. *Mycalesis safitza aethiops* subsp. nov.*Mycalesis safitza*, Aurivillius, *l.c.* p. 56. n. 46 (1899) (partim : Abyssinia); Pagenst., *l.c.* p. 132. n. 1 (1902) (syn. excluded).

All the specimens found by O. Neumann and Baron von Erlanger differ from the East and South African *safitza safitza* in the discal line on the underside of the forewing being curved costad, standing at right angles to costal margin, and in the discal line of the hindwing being much more irregular, curving distad between R¹ and R³.

The clasper of the ♂ has a much shorter narrowed distal portion. The two tufts on the upperside of the hindwing are of the same colour as in *s. safitza*, the one in the cell being creamy grey, the other dark brown. The specimens are all subocellate or punctate on the underside of the hindwing, with the exception of the two individuals from the Gillet Mts., in which the ocelli are rather better developed. None of the specimens have the discal line of the underside conspicuously bordered with cream-colour. The same applies to the individuals in Baron von Erlanger's collection.

10 ♂♂, 3 ♀♀, from : Gillet Mts., 1900—2200 m., 1. vii. 1900, *type*; Lake Abassi, 4. 6. and 9. xii. 1900; Abera to Koritscha, 23. xii. 1900; Alesa, Koscha, 23. ii. 1901; Alesa to Schetie, Koscha, 25. ii. 1901; Uma R., Konta, 1. iii. 1901; Anderatscha, Kaffa, 24. iii. 1901; Kankati to Djibbe, Djimma, 26. iii. 1901.

Besides a long series of *aethiops*, Baron von Erlanger found also two specimens of *M. anymana vicaria* Thurai, not mentioned by Pagenstecher, one from Wolesch, 15. ii. 1901, and the other from Fanole, 27. vi. 1901.*

There seem to be numerous undescribed African species of *Mycalesis* in collections. The genus is, however, a difficult one to deal with. A thorough revision, based on a large material and an extensive study of the morphology of the species, is a great desideratum. As we have no time at present for a thorough comparison of the structure of these insects, we abstain from describing any new species, but offer only a few corrections to the list given in Aurivillius's great work.

M. mandanes Hew. is not a synonym of *auricruda*, but is the same species as *graphidabra*.

M. kenia Rogenh. appears to us to be a subspecies of *mandanes*. The structure of the type should be compared with that of *mandanes*.

M. ansorgei Sharpe is the same as *mollitia* Karsch, the latter name having priority.

M. dentata Sharpe (= *fluxiatilis* Grose-Smith) is apparently the same as

* The larger proportion of Baron von Erlanger's specimens is now in the Tring Museum.

M. dubia Auriv., the description and figure of the latter agreeing well with our series of *dentata*.

M. nebulosa Felder, *Reise Novara Lep.* p. 502, is said to be from Guinea. The only specimen in the Felder collection is labelled "Senegal, type." Guérin's *funebri*, also from the Senegal, may have been based on an ocellate specimen of the same species.

M. angulosa Bntl. is quite distinct from *vulgaris* Bntl.

71. *Neocoenyr*a duplex.

*Neocoenyr*a duplex Butler, *Proc. Zool. Soc. Lond.* 1885. p. 758. n. 4 (1886) (Somaliland); Auriv., *l.c.* p. 72. n. 4 (1899).

Only 1 ♀, from Gololota, 18. vi. 1900.

As the type of *Ypthima* Hübner, *Verz. bek. Schm.* p. 63, is *cassus* L., according to our simplified treatment of composite genera [see *Nov. Zool.* x. Suppl. p. xxii. (1903)] we employ for the following insects the term *Callyphtima*, which is the defined term coming next in priority after *Ypthima*, *Strabena* being a *nomen nudum*.

72. *Callyphtima* itonia.

Ypthima itonia Hewitson, *Trans. Ent. Soc. Lond.* (3). ii. p. 287. n. 11. t. 18. f. 13 (1865) (White Nile).

Ypthima itonia, Aurivillius, *l.c.* p. 78. n. 25. (1899).

Ypthima hoehneli Holland, *Proc. U. S. Nat. Mus.* xviii. p. 744 (1896).

Ypthima asterope, Pagenstecher (*non* Klug, 1832), *l.c.* p. 132. n. 1 (1902) (partim).

All the specimens obtained by O. Neumann as well as by Baron von Erlanger differ from typical *itonia* in the underside being more rufescent and in the ocelli of the underside of the hindwing being absent or vestigial, only one of Baron von Erlanger's specimens (Lake Awala, 17. xii. 1900) having a series of seven very small ocelli. The clasper is unlike that of any other African species of *Callyphtima*, being broad and apically bilobate. On the innerside there is an apical longitudinal ridge, which is higher in the Abyssinian specimens than in our West African ones. We have not sufficient material for studying the geographical and seasonal variation of the species, and therefore abstain from giving a name to the present non-ocellate form of *itonia*. SC² of the forewing is distal of the upper angle of the cell. Aurivillius, *l.c.*, had some doubts about *hoehneli* being distinct from *itonia*. The description of *hoehneli* seems to us to agree perfectly with our specimens of *itonia* from East Africa.

2 ♂♂, 1 ♀, from : Lake Abassi, 7. xii. 1900; Abera, Djamdjam, 17. xii. 1900.

Baron von Erlanger met with it at : Lake Abassi, 11. xii. 1900; Lake Awala, 17. xii. 1900; Awara, 20. xii. 1900.

73. *Callyphtima* impura.

Ypthima impura Elwes & Edwards, *Trans. Ent. Soc. Lond.* p. 23. n. 27. t. 3. f. 48 (1893) (Angola; Gaboon; Zambesi; Delagoa Bay); Auriv., *l.c.* p. 78. n. 22 (1899).

Ypthima asterope, Pagenstecher (*non* Klug, 1832), *l.c.* (1902) (partim).

This species seems to be very common in the regions traversed by O. Neumann and Baron von Erlanger. Most specimens are without ocelli on the underside

of the hindwing, but some have three, one in front and two behind; in a ♂ from the Upper Bussijo the first and second ocelli are large, the first being the larger. The tenth tergite of the ♂ is not gradually narrowed to a point as it is in *itonina*, *asterope*, *simplicia*, and *granulosa*, but ends in a short acute tooth. The tergite is, moreover, channelled above, the lateral edges being raised.

Miss Sharpe, in *Proc. Zool. Soc. Lond.* p. 530. n. 5 (1896) records *doleta* from Sheikh-Hussein. As *doleta* is apparently confined to the western side of the Continent, where it is common, we doubt the correctness of the identification of the Sheikh-Hussein specimens. Miss Sharpe's individuals belonged probably to the present species. *Callyphthima doleta* Kirby differs in the structure of the antenna very much from the other African species. The biseriate grooves of the antenna are in *doleta* restricted to the apical portion of each segment, the grooves being very much reduced in length and width. In the other species of *Callyphthima* the grooves extend down to the bases of the segments, and the two of each segment are separated from one another by a carina.*

4 ♂♂, 2 ♀♀ from : Gara-Dajj or Abunass, 2500 to 2700 m., 10. vii. 1900; Upper Bussijo, Gindeberat, 24. ix. 1900; Rafissa, Lake Abassi, 10. xii. 1900; Habela to Alata, Sidamo, 11. xii. 1900; Abera, Djamdjam, 17. xii. 1900; Alesa, Kotscha, 23. ii. 1901.

A long series among Baron von Erlanger's material from Lake Abassi, 9—12. xii. 1900; Galata, 13. xii. 1900; Sagan, 8. i. 1901.

74. *Callyphthima simplicia*.

Ypthima simplicia Butler, *Ann. Mag. N.H.* (4). xviii. p. 481 (1883) (Atbara); Auriv., *l.c.* p. 77. n. 20 (1899).

Ypthima asterope, Pagenstecher (non Klug, 1832), *l.c.* (partim).

2 ♂♂ from : Gara Dajj or Abunass, 2500 to 2700 m., 10. vii. 1900; Aveve, Kollu, Schoa, 22. ix. 1900.

The specimens are larger and below darker than the type of *simplicia*; the specimen from Aveve has two large ocelli on the underside of the hindwing, besides the small anal ocellus; in the other specimen all three ocelli are small.

The specimens resemble in the dark coloration more *granulosa* Butl. than *simplicia*; but as the abdomen of the type of *granulosa* is missing, it is hardly possible to do more than accept as *granulosa* the insect treated as such by Messrs. Elwes and Edwards.

A specimen of *simplicia* similar to that from Gara Dajj is among Baron von Erlanger's material from Akaki, 22. x. 1900.

75. *Callyphthima asterope*.

Hipparchia asterope Klug, in Hempr. & Ehrenb., *Symb. Phys.* text t. 29. f. 11—14. ♂♀ (1832) (Syria).

Ypthima asterope, Aurivillius, *l.c.* p. 77. n. 18 (1899) (partim?); Pagenst., *l.c.* (partim).

A specimen from Odamuda to Djugi, Djidda, 20. vi. 1900 (Erlanger and Neumann), and several from Ginir, 20. ii. 1901, Wolesch, 15. iii. 1901, and Ganale, 15. iv. 1901 (Erlanger), agree fairly well with Syrian *asterope* except

* See *Nov. Zool.* v. p. 375 ff.: "The Antennae of Butterflies."—I have there described and figured (p. 389. t. 15. f. 57) the antenna of *doleta* as that of *asterope*, being misled by a wrong identification in the collection.—K. J.

in the clasper being obviously broader and shorter. The naming of inconspicuous species and subspecies of this genus must be left to a future revision of the genus.

In Baron von Erlanger's collection there are several specimens of another small *Callyphthima* from the Webi Mane, 26 and 27. iii. 1901, and from Gimir, 2. ii. 1901, which seem to represent a new species, if they do not belong to some Indian species. The underside of the hindwing is rather paler than in *asterope*, and the clasper is much slenderer.

Callyphthima pupillaris Butl. is easily recognised by the short and very broad, triangular, tenth tergite of the ♂. The species is ocellate or non-ocellate on the underside of the hindwing.

ACRAEINAE.

76. *Pardopsis punctatissima*.

Acraea punctatissima Boisduval, *Faune Mad. Bourbon, Maur.* p. 31. t. 6. f. 2 (1833).

Pardopsis punctatissima, Aurivillius, *l.c.* p. 81. n. 1 (1899) ; Pagenst., *l.c.* p. 133. n. 1 (1902).

The specimens from tropical Africa are similar to those from Madagascar, having smaller black dots than the individuals from temperate South Africa.

6 ♂♂, 1 ♀ from : Harro Rufa, Mojo River, 1. vi. 1900 ; Mojo River, Atschabo, 2. vi. 1900 ; Mojo to Wabbi Rivers, 7. vi. 1900 ; Oda, near Gurgura, 13. vi. 1900 ; Jabolo, 14. vi. 1900 ; Sekwala, Schoa, 18. xi. 1900.

77. *Acraea quirina*.

Papilio Parnassius quirina Fabricius, *Spec. Ins.* ii. p. 36. n. 152 (1781) ("Madras" err. loci).

1 ♀ from : Upper Gelo River, 4. v. 1901.

78. *Acraea admatha*.

Acraea admatha Hewitson, *Exot. Butt.* iii, *Acraea* t. 3. f. 16. 17 (1865) (Old Calabar).

In one specimen there is a small white patch consisting of two spots at the abdominal margin of the hindwing.

2 ♂♂ from : Scheko, 26. iv. 1901.

79. *Acraea insignis*.

Acraea buckni, Hewitson (non Butler, 1875), *Ent. Mo. Mag.* xiv. p. 155 (1877) (Dar-es-Salaam).

Acraea insignis Distant, *Proc. Zool. Soc. Lond.* p. 184 (1880) (Magila); Auriv., *l.c.* p. 89. n. 18 (1899).

Acraea balbina Oberthür, *Et. et Ent.* xii. p. 6. n. 11. t. 3. f. 8 (1888) (Germ. E. Afr.).

Acraea insignis siginna Suffert, *Iris* xvii. p. 19 (1904) (Germ. E. Afr.).

The specimens procured by Herr Neumann have the black spots of the hindwing completely merged together above and below, as in the individuals named *siginna* by Herr Suffert, more so than in the specimen figured as *balbina* by Oberthür. Only in one specimen there are some whitish dots in the black patch on the underside.

3 ♂♂, 1 ♀ from : Banka, Malo, 17. ii. 1901 ; Northern Kaffa, beginning of April 1901.

80. *Acraea horta neobule*.

Acraea neobule Doubleday, Westw. & Hew., *Gen. Diurn. Lep.* i. p. 140. n. 8. t. 19. f. 3. ♀ (1848) (Congo); Reiche, in Ferr. & Gall., *Voy. Abyss., Ent.* p. 466. t. 33. f. 3. 4 (1849) (Abyssinia); Auriv., *l.c.* p. 89. n. 21 (1899).
Acraea horta, Pagenstecher, *l.c.* p. 133. n. 1 (1902).

7 ♂♂, 1 ♀ from: Bubassa, 22. v. 1900; Djabdjabdu, 24. v. 1900; Ganda Ali to Idja Harrorissa, 30. v. 1900; Harro Rufa, Mojo River, 1. vi. 1900; Mojo River, Atschabo, 3. vi. 1900; Alesa, Koscha, 25. ii. 1901.

81. *Acraea chilo*.

Acraea chilo Godman, *Proc. Zool. Soc. Lond.* p. 184. t. 19. f. 4. ♂, 5. ♀ (1880) (Abyssinia).
Acraea zetes var. *acara*, Pagenstecher, *l.c.* p. 133. n. 2 (1902) (partim).

1 ♂, 2 ♀♀ from: Sso-Omadu, North Somaliland, 12. & 13. ii. 1900; Mojo River, Atschabo, 2. vi. 1900.

In coll. Baron von Erlanger 1 ♂ from Web, 19. iii. 1901, and 1 ♀ from Solole, 11. iv. 1901.

These specimens were enumerated by Pagenstecher as *acara*, together with two specimens of the following form. It appears, indeed, quite possible that *chilo* is only a form of *zetes* with reduced black spots and narrow black margin. They stand in two different sections of *Acraea* in Aurivillius's work.

82. *Acraea zetes sidamona* subsp. nov.

♂. Wings, *upperside*, resembling such Uganda specimens of *zetes* as stand about halfway between the West African *z. zetes* and East African *z. acara*.—Forewing: cell as in *acara*, a red dot each proximally of black subbasal cell-spot and of postcellular subbasal spot; discal costal band of black spots as in *acara*, but spot R³—M¹ more proximal than the others, nearly touching discocellular spot, the red spots just outside discocellulars therefore nearly isolated; red subapical spots outside the black costal band rather smaller than the spots of this band; six isolated reddish orange submarginal spots, larger than in *z. zetes* ♂.—Hindwing: black basal area a little more extended than in *z. acara*, black discal spots as in that subspecies; distal border as wide as in the average Natal specimens.

Underside more red than in the other geographical forms, pinkish like *upperside*, but paler, the hindwing being washed with white as in *acara*.—Forewing: black spots a little smaller than above; yellow submarginal spots all separated from disc by a broad black border, except spot SC⁵—R¹, which is long.

1 ♂ from: Alata, Sidamo, 13. xii. 1900.

1 ♂ in coll. Baron von Erlanger from: Fanole, 27. vi. 1901.

83. *Acraea oscari*.

Acraea oscari Rothschild, *Nov. Zool.* ix. p. 595. n. 1 (1902) (Banka).

2 ♂♂ from: Banka, Malo, 16 & 17. ii. 1901.

In one of the two specimens the hindwing is somewhat washed with white between the black subbasal and median spots on the upperside.

84. *Acraea perenna kaffana*.

Acraea perenna kaffana Rothschild, *Nov. Zool.* ix. p. 595. n. 2. (1902) (Kaffa and Konta).

The sexes are practically alike in colour.

3 ♂♂, 1 ♀ from : Dalba to Uma River, Konta, 28. ii. 1901, *type*; Uma River, Konta, 1. iii. 1901; Anderatscha, Kaffa, 12 to 19. iii. 1901; Godjeb, Bonga, Kaffa, 4. iv. 1901.

85. *Acraea braesia*.

Acraea braesia Godman, *Proc. Zool. Soc. Lond.* p. 538 (1885) (Kilimandjaro); *Anriv., l.c.* p. 99. n. 52 (1899); Pagenst., *l.c.* p. 134. n. 5 (1902).

The border is slightly broader than in East African specimens.

Only 1 ♀ from : Gurgura to Gololota, 17. vi. 1900.

86. *Acraea doubledayi*.

Acraea doubledayi Guérin, in Lefebvre, *Voy. Abyss.* vi. p. 378 (1849) (Abyssinia); *Auriv., l.c.* p. 99. n. 53 (1899).

1 ♂, 1 ♀ from : Artu and Djildessa, north of Harar, 2. & 3. iii. 1900.

87. *Acraea caecilia*.

Papilio Heliconius caecilia Fabricius, *Spec. Ins.* ii. p. 34. n. 142 (1781) (Afr. acquin.).

Acraea caecilia, *Aurivillius, l.c.* p. 100. n. 57 (1899).

The wings are rather more red than in ordinary *caecilia*.

2 ♂♂ from : Abulcassim, 2400—2600 m., 16. vii. 1900; Mole River, 22. i. 1901.

88. *Acraea natalica pseudegina*.

Papilio egina, Stoll (*non* Cramer, 1775), in Cram., *Pap. Ex. Suppl.* p. 122. t. 25. f. 3. 3c (1790) (Guinea; Sierra Leone).*

Acraea pseudegina Westwood, in Doubl., Westw. & Hew., *Gen. Diurn. Lep.* ii. p. 531 (1852); *Auriv., l.c.* p. 100. n. 59 (1899).

Acraea natalica, Pagenstecher, *l.c.* p. 134. n. 7 (1902).

1 ♂ from : Alesa, Koscha, 22. ii. 1901.

Another ♂ among Baron von Erlanger's specimens, recorded by Pagenstecher as *natalica*.

89. *Acraea terpsicore*.

Papilio Heliconius terpsicore Linné, *Syst. Nat.* ed. x. p. 466. n. 45 (1758) ("Asia" err. loci).

Acraea terpsicore, *Aurivillius, l.c.* p. 104. n. 64 (1899); Pagenst., *l.c.* p. 134. n. 8 (1902).

An individually variable species. The black oblique band of the forewing is complete in nearly all the specimens obtained. In many individuals there are red spots between the black dots on the underside of the hindwing, and in one pair (Lake Abassi) also between the black halfrings which border the buff marginal spots. The forewing is smoky brown in one ♀ (from Walenso).

* Omitted in Index to Suppl.

15 ♂♂, 8 ♀♀ from : Gillet Mts. 1900—2200 m., 4. vii. 1900 ; Walenso, 2000 m., 8 & 9. vii. 1900 ; Abuleassim, 2400—2600 m., 16. vii. 1900 ; Djaffa, 19. vii. 1900 ; Adis Abeba, 5. ix. 1900 ; Aveve, Kollu, 22. ix. 1900 ; Upper Bussijo River, Gindeberat, 25. ix. 1900 ; Badattino to Abuje, Schoa, 28. ix. 1900 ; Madali, Abai River, 1. x. 1900 ; Badattino, Gindeberat, 4. x. 1900 ; Abuje, Schoa, 29. ix. 1900 ; Lake Abassi, 8. xii. 1900 ; Alesa, Koscha, 25. ii. 1901.

90. *Acraea vinidia*.

Acraea vinidia Hewitson, *Ent. Mo. Mag.* xi. p. 130 (1874) (Angola) ; Auriv., *l.c.* p. 105. n. 68 (1899) ; Pagenst., *l.c.* p. 135. n. 9 (1902).

The three specimens obtained are paler than, or as pale as, the East African *A. r. tenella* on the upperside ; they agree, however, on the underside in the width of the marginal border, especially of the hindwing, better with West African specimens. They have on the upperside pale marginal spots, either on both wings or on the hindwing only.

As *Acraea vinidia* is a very variable species, to which, in our opinion, several other "species" belong as individual and geographical varieties, we think it better to abstain for the present from giving a name to the North-east African form.

3 ♂♂ from : Aveve, Kollu, Schoa, 22. ix. 1900 ; Madali, Abai River, 1. x. 1900 ; Godjeb to Bonga, Kaffa, 4. iv. 1901.

91. *Acraea bonasia alicia*.

Acraea eponina, Oberthür (*non* Cramer, 1872), *Ann. Mus. Civ. Genova* xv. p. 157. n. 28 (1879) (Schoa).

Acraea abomasia, Aurivillius, *l.c.* p. 105. n. 72 (1899) (partim) ; Pagenst., *l.c.* p. 135. n. 10 (1902).

Acraea alicia Sharpe, *Ann. Mag. N. H.* (6). v. p. 442 (1890) ; Auriv., *l.c.* n. 73 (1899).

The specimens of *bonasia* from Abyssinia and Somaliland agree best with the East African form *alicia*, which completely intergradates with the West African form *bonasia*. The width of the orange-red area on the forewing is individually variable, in some specimens the base of cellule M¹—M² being black, in others not. The black distal borders to the fore- and hindwing, *below*, are not streaked with buff at the veins in *alicia* ♂♂, or only faintly.

32 ♂♂, 1 ♀ from : Upper Bussijo, Gindeberat, 24. ix. 1900 ; Lake Abassi, 4 & 9. xii. 1900 ; Alata, Sidamo, 13. xii. 1900 ; Abera, 23. xii. 1900 ; Abera to Koritscha, Uatadera, 23. xii. 1900 ; Banka, Malo, 16 & 17. ii. 1901.

92. *Acraea cabira* f. *apexida*.

Acraea apexida Oberthür, *Et. d'Ent.* xvii. p. 23. t. 2. f. 15 (1893) (Usambara) ; Auriv., *l.c.* p. 106. n. 76 (1899).

This is doubtless the red form of *cabira*, as suggested by Aurivillius, our series of *cabira* showing all intergradations in colour.

In the three specimens among O. Neumann's material the red patch situated on the forewing before the posterior margin is narrower than in the specimens from Uganda and East Africa, the individuals representing perhaps a distinct North-eastern subspecies. ;

3 ♂♂ from : Lake Abassi, 4. xii. 1900 ; Gardulla, 13. i. 1901 ; Djala, Gofa, 31. i. 1901.

93. *Acraea pharsalus rhodina*.

Acraea pharsalus rhodina Rothschild, *Nov. Zool.* ix. p. 595. n. 3 (1902) (Kaffa).

The black median and discal spots are larger than in *p. thesprio* from East Africa, the discal spot R^1-M^2 seldom standing more than $\frac{1}{2}$ mm. distant from cell at M^1 , often entirely filling up the base of cellules R^3-M^1 . The interspaces between this discal costal band and the black marginal border are red, the red spot R^2-R^3 being longer than the others. There is also a more or less narrow red spot outside the black discal spot R^3-M^1 . The distal border of the hindwing is broader above and below than in *thesprio*, and the black dots somewhat larger, partly touching each other.

16 ♂♂ from: Banka to Omo, 18. ii. 1901; Wori to Gamitscha, Kaffa, 5. iii. 1901; Anderatscha to Godjeb, Kaffa, 24. iii. 1901; Godjeb to Bonga, Kaffa, 4. iv. 1901; Scheko, 25. iv. 1901; Upper Gelo River, 4. v. 1901.

The black markings of the two Scheko specimens are a little smaller than in the other individuals.

94. *Acraea encedon*.

Papilio Barbarus encedon Linné, *Syst. Nat.* ed. x. p. 488. n. 188 (1758) ("in Indiis" errore).
Acraea encedon, Aurivillius, *l.c.* p. 110. n. 84 (1899).

The series of specimens comprises three forms:

(a) *A. e. f. दौरa*.

Acraea दौरa Godman & Salv., *Proc. Zool. Soc. Lond.* p. 221. t. 17. f. 3 (1884) (Niger).

This was the commonest form at Harar.

20 ♂♂, 11 ♀♀ from: Harar, 3 to 7. iv. 1900; and 3 ♂♂ from: Lake Abassi, 6. xii. 1900; Alesa, Koscha, 23. ii. 1901.

The specimen from Lake Abassi has the apex of the forewing black down to the subapical band, which is hardly paler than the disc, the costal margin being also blackish.

(b) *A. e. f. encedon*.

Papilio Barbarus encedon Linné, *l.c.*

In one ♀ the forewing has a length of 35 mm., while in another it is only 27 mm. long.

5 ♂♂, 2 ♀♀ from: Harar, 7. iv. 1900; Badattino to Abuje, Schoa, 28. ix. 1900; Madali, Abai River, 1. x. 1900; Lake Abassi, 9. xii. 1900; Alesa, Koscha, 23. ii. 1901; Dalba to Uma River, Konta, 28. ii. 1901.

(c) *A. e. f. lycia*.

Papilio Heliconius lycia Fabricius, *Syst. Ent.* p. 464. n. 94 (1775) (Sierra Leone).

The specimens approach the yellowish f. *sganzini*, which it is hardly worth keeping apart from f. *lycia* under a separate name.

2 ♂♂, 3 ♀♀ from: Harar, 9. iv. 1900; Lake Zuai, 21. xi. 1900; Lake Abassi, 7. xii. 1900; Alesa, Koscha, 22. ii. 1901; Uma River, Konta, 1. iii. 1901.

95. *Acraea peneleos gelonica* subsp. nov.

♂. Wings, *upperside*.—Forewing: the reddish orange spots situated in *p. peneleos* between M^1 and hinder margin are absent or replaced by some creamy scaling, only one specimen bearing a small reddish streak at hinder margin.—Hindwing: black distal border broader than in *p. peneleos*, especially in the middle, the border surpassing here in width the distance from the border to the apex of the cell.

On the *underside* the border of the hindwing is still broader than above, being edged proximally with tawny brown, which reaches to cell at R^3 and M^1 , there being only a small buff spot between these veins; basal area of wing olivaceous buff or washed with rufous; the black dots somewhat reduced in size and number.

3 ♂♂ from: Upper Gelo River, 4. v. 1901.

96. *Acraea safie*.

Acraea safie Felder, *Reise Novara, Lep.* p. 370. n. 533 (1867) (Abyss. mer.); Auriv., *Konigl. Sr. Vet. Abad. Hann.* xxxi. 5. p. 114. n. 104 (1899) (Abyssinia).

Acraea antinorii Oberthür, *Ann. Mus. Civ. Genova* xv. p. 157. n. 29. t. 1. f. 3 (1880) (Schoa, June-August and September); id., *l.c.* xviii. p. 719. n. 31 (1883) (Schoa, June and July).

Acraea safie ab. (var ?) *antinorii*, Aurivillius, *l.c.*

Acraea safie var. *antinorii*, Pagenstecher, *Jahrb. Nass. Ver. Nat.* lv. p. 136. n. 12 (1902) (Moldscha and Gigero, December).

This species appears in two forms:

(a) *A. safie* f. *safie*.

Hindwing with a broad, curved, yellowish band beyond middle.

(b) *A. safie* f. *antinorii*.

Yellowish spots M^1 — SM^2 of forewing and band of hindwing more or less strongly reduced, the band of the hindwing and the posterior spot of the forewing being sometimes absent. This is apparently the commoner form.

1 ♂ of f. *safie* from Gardulla, 13. i. 1901.

14 ♂♂, 1 ♀ of f. *antinorii* from: Gara Daij or Abumass, 2500—2700 mm., 10. vii. 1900; Abulcassim, 2400—2600 mm., 16. vii. 1900; Aveve, Kollu, Schoa, 22. ix. 1900; Koritseha to Tomata, Dara R., Gudji, 24. xii. 1900; Banka, Malo, 17. ii. 1901; Godjeb to Bonga, Kaffa, 4. iv. 1901.

97. *Acraea jodutta aethiops* subsp. nov.

♂. Similar to the West African *A. jodutta jodutta*.—*Upperside*, forewing with the streak R^2 — R^3 of the submarginal band one-third longer than streaks SC^5 — R^2 ; the discal patch extending closer to base, the black basi-costal area being only 3 mm. wide at posterior margin; a diffused buff patch in cell.—Black basal area of hindwing more reduced; the black distal border narrower and more sharply defined between costal margin and R^3 .

On the *underside* the cell of forewing more washed with buff; the black dots of

the hindwing reduced in size and number, and the brown distal marginal border anteriorly better defined.

♀. Subapical band of forewing angulate as in ♂, either orange or white; the orange patch in front of posterior margin much wider than in ♀ *j. jodutta*, resembling that of ♀ *j. esebria* f. *esebria*.—Hindwing orange (much paler than in f. *esebria*), narrowly black at base, with the black dots of underside hardly showing through; distal margin black only at anterior angle, streaks of posterior cellules vestigial.

On *underside* the subapical band and postcellular patch are connected with one another; black dots reduced as in ♂.

1 ♂, 2 ♀ ♀ from : Dereta Mts., Kaffa, 2. iii. 1901; Gamitscha to Anderatscha, Kaffa, 6. iii. 1901.

98. *Acraea circeis rhodina* subsp. nov.

♂. Similar to *A. circeis lycoides* from East Africa, but the basal area of the hindwing below of a pale ferruginous colour, and the forewing and marginal band of the hindwing also washed with ferruginous.

4 ♂ ♂ from : Banka, Malo, 17. Febr. 1901; and Gamitscha to Anderatscha, Kaffa, 6. March 1901.

99. *Acraea lycoa aequalis* subsp. nov.

♂ ♀. The sexes alike in colour. Spots on forewing buff, in size and position the same as in the East African form of *lycoa*, the two postdiscal spots standing mostly well separated from the subcostal and discal spots; a buff area on the hindwing as in the ♀ ♀ of *lycoa*, rather sharply defined in both sexes, not in the ♀ only.

On the *underside* the greater portion of forewing blackish, the spots nearly as clearly marked as above; base of hindwing paler reddish than in East African *lycoa*, the buffish area less sharply defined than above, but better than in the ♂ ♂ of *lycoa* from West and East Africa.

9 ♂ ♂, 4 ♀ ♀ from : Lake Abassi, 6. xii. 1900; Koritscha to Tomato, Dara R., Gudji, 24. xii. 1900; Uaja to Banka, Malo, 14. ii. 1901; Banka, Malo, 16. ii. 1901; Banka to Omo, 18. ii. 1901; Dereta Mts., Kaffa, 2. iii. 1901, *type*.

The most noteworthy feature in this form is the practical identity of the sexes in pattern and colour, in *lycoa* from East as well as West Africa the sexes being dissimilar.

In collection Baron von Erlanger there are three specimens of this *Acraea*, not recorded by Dr. Pagenstecher, from : Wonda, north of Lake Abassi, 6. xii. 1900; and Lake Abassi, 11. xii. 1900.

100. *Acraea alciope schecana* subsp. nov.

♂. The buff-yellow band of the *upperside* a little paler than in West African ♂ ♂, the black distal border of the hindwing wider, being just behind R³ half as wide again as the distance from this band to the apex of the cell, the black streaks between the veins correspondingly shorter; basal dots vestigial.—On *underside* the black dots of the hindwing reduced in size and number; the brown distal border as wide as above.

1 ♂ from Scheko, 25. iv. 1901.

101. *Planema epaea homochroa* subsp. nov.

♂ ♀. The sexes practically alike in colour, resembling the ♂ of *ep. epaea*, the markings of the forewing and the proximal portion of the orange area of the hindwing being only a very trifle paler in the ♀ than in the ♂.

Rather paler orange *above* than *ep. epaea* ♂, the black distal area of the hindwing more restricted, the orange colour reaching to the edge of the wing from the fold R¹—R² backwards, the fringe remaining black. On the *underside* the basal area of the hindwing is paler than in *ep. epaea*, and the pale orange band externally of this area more sharply limited distally and narrower, not exceeding in width beyond the apex of the cell; the outer portion of the hindwing from the apex of the cell to distal edge more evenly tawny, shaded with brown, the blackish apical area less extended.

2 ♂♂, 1 ♀, from: Banka, Malo, 16. ii. 1901; Kankati to Djibbe, Djimma, 26. iii. 1901.

PAPILIONIDAE.

102. *Papilio echerioides oscar*.

P. ech. oscar Rothschild, *Nov. Zool.* ix. p. 597. n. 9 (1903).

11 ♂♂ and 3 ♀♀ were obtained at the following places: Kankati to Djibbe, Djimma, 26. iii. 1901; Kankati forest, 3. iv. 1901; Wori to Gomitscha, Kaffa, 5. iii. 1901; Gomitscha to Anderatscha, Kaffa, 5. iii. 1901; Anderatscha to Godjeb, 24. iii. 1901; Detscha to Schnbba, Kaffa, 11. iv. 1901; Schubba to Sebenna, Kaffa, 11. iv. 1901.

103. *Papilio echerioides leucospilus*.

P. ech. leucospilus Rothschild, *l.c.* p. 598. n. 10 (1903).

3 ♂♂ and 1 ♀ from Gara Mulata, near Harar, 26. to 29. iii.* 1900 (Erlanger and Neumann).

The copulatory organs of *Papilio echerioides* and allied species (*jacksoni*, *homeyeri*, etc.) are practically alike.

104. *Papilio demodocus demodocus*.

Papilio Eques Achivus demodocus Esper, *Aust. Schm.* p. 205. n. 93. t. 51. f. 1 (1798) ("China Bengal"!).

Papilio demodocus docusalemo Suffert, *Iris* xvii. p. 101. t. 2. f. 1 (1904) (Tabora).

Papilio demodocus albicans, id., *l.c.* p. 402 (1904) (Kamerun).

Papilio demodocus umbila, id., *l.c.* (1904) (the dark colour not due to moisture, etc., but natural).

A number of specimens of this common insect were obtained at various places in Northern Somaliland, Shoa, and Kaffa. There are no structural differences between *P. dem. demodocus* from Continental Africa and South Arabia, *dem. bennetti* from Socotra, and *dem. erithonioides* from Madagascar.

According to Aurivillius, and, quoting from him, Pagenstecher, *P. dem. demodocus* occurs also on Madagascar. The authority for this statement is

In the original description the 20. and 25. March are erroneously given as dates of capture.

Boisduval (1833). However, the Madagascar specimens, which Boisduval referred to "*demoleus*," were doubtless *erithonioides*.

The species does not vary geographically on the Continent. The names supplied by Herr Suffert apply to individual aberrations. To call these individuals "subspecies," and employ for them the formula now accepted by most students of geographical variation for the *varietas geographica* only, is very misleading for those who do not happen to know individuals similar to those described by Herr Suffert. We suppose it was not Herr Suffert's intention to publish as subspecies all the numerous individual aberrations described by him in the number of the *Iris* above cited, as he frequently speaks of them in the text as aberrations, though he designates *Papilio pylades lapydes* and the named individuals of similar standing as "n. subsp."

We have three individuals from the collection of the late Mons. Capronnier representing Capronnier's ab. *nubila*, and we can only again confirm the statement of Aurivillius that the deep colour of the markings is due to discoloration. The wings of these specimens are not black, but have a brownish tint like decayed specimens. The yellow markings are not quite evenly coloured, almost every spot being darker in some places than in others, and some spots having even retained small dots of the natural pale yellow colour of *demodocus*. We have quite a number of specimens of *Papilio demodocus*, *menestheus*, *zalmoxis*, *hesperus*, etc., showing all grades of discoloration. We have repeatedly received collections in tins in a more or less decayed condition, the specimens lying on the top being in perfect order, and those at the bottom of the tin being damp and quite spoiled, the colours being often so evenly changed that the uninitiated author of names might very well be misled to treat such individuals as natural varieties.

105. *Papilio constantinus*.

Papilio constantinus Ward, *Ent. Mo. Mag.* viii. p. 34 (1871) (Ribé, E. Afr.).

Only 2 ♂♂ were obtained, at the Mole River, 22. i. 1901. They agree with individuals from Mombasa and Kibwezi, British East Africa.

In most specimens of *P. constantinus* from Natal and Delagoa Bay the band of the hindwing, above, is narrow, and the submarginal spots stand closer to the margin than in the individuals from British East Africa and Ethiopia, the black discal area of the hindwing being obviously wider in most southern examples than in northern ones. Nearly all our specimens from the Kikuyu Escarpment, British East Africa, are distinguished by a broad band and large submarginal spots, the contrast in the width of the black discal area of the hindwing between Delagoa Bay specimens and the Kikuyu ones being very striking. The only three specimens from German East Africa (Mikindani) which we possess are broad-banded, and have the submarginal spots of the hindwing in the same position as Delagoa Bay specimens. They are, moreover, remarkable for possessing, on the upperside of the forewing before R^1 , a large creamy patch which touches the cell, and includes a small black spot, patch R^1-R^2 being also enlarged. The hairy streaks on the upperside of the forewing are variable in width and number. They are narrower in all our Kikuyu specimens and in several examples from other localities, while they are merged together in many individuals from Mombasa, Kibwezi, Mikindani, Delagoa Bay, and Natal.

106. *Papilio dardanus antinorii*.

Papilio antinorii Oberthür, *Ann. Mus. Civ. Genova* xviii. p. 711. t. 9. f. 4 (♀) (1883) (Shoa) ; Auriv., *l.c.* p. 464. n. 6 (1899) (Abyssinia ; Somaliland).

Localities : Abd-el-Kadr, south of Harar, 14.v.1900 ; Gillet Mts., 1900—2200 m., 29. vi. 1900, 4. vii. 1900 ; Walenso, Gillet Mts., 2000 m., 9. vii. 1900 ; Gara-Daij or Abunass, 1900—2200 m., 10. vii. 1900 ; Abulcassim, 2400—2600 m., 16. vii. 1900 ; Koritscha to Tomata, Dara R., Gudji, 24. xii. 1900 ; Wori to Gamitscha, Kaffa, 5. iii. 1901 ; Anderatscha, Kaffa, 12 to 19. iii. 1901 ; Kankati to Djibbe, Djimma, 26. iii. 1901.

A long series of ♂♂, but only two ♀♀, which belong to the ordinary kind resembling the *male*. The underside of the hindwing and the apical area of the underside of the forewing varies in the depth of the yellow tint, some specimens being more or less ochraceous, while others are as pale below as above. This difference, which is met with also in the other subspecies of *dardanus*, is not seasonal. The upperside is slightly deeper yellow in some specimens than in others. The black area of the upperside of the forewing has a nearly straight proximal edge from SC^4 — SM^2 , apart from the dentition at the veins, and forms a kind of hook at the costal margin, the creamy area occupying the base of the cellule SC^4 — SC^5 to a larger extent than even in the Malagasic subspecies *meriones*. This creamy triangle SC^4 — SC^5 is occasionally produced distad along SC^4 , being sometimes even connected with the subapical spot SC^4 — SC^5 , which in this case is produced proximad along SC^4 . The black discal spots R^1 — R^3 of the upperside of the hindwing are small, sometimes absent ; the black anal patch is comparatively large, often connected with the marginal spot M^2 , seldom divided at M^2 into two patches, and includes often a few pale scales indicating a transverse division of the patch ; the black submarginal spots are as a rule separate, the middle ones being generally very small, even vestigial, but there occur specimens in which the spots form a continuous zigzag band from C to R^3 ; the tail is mostly cream-colour, with a small black central streak, not rarely all cream-colour, and occasionally more extended black than creamy. The upper two cell-streaks of the underside of the hindwing are not rarely on a long stalk, as in most *meriones*.

P. dard. antinorii occurs northwards to Eritrea ; the southern limit of its range is as yet not known.

There are five Continental subspecies of *dardanus* :

- (a) *P. dardanus eenea* from South Africa, gradually merging into the next.
- (b) *P. dardanus tibullus* from tropical East Africa (Delagoa Bay northwards).
- (c) *P. dardanus polytrophus* * from the mountainous districts east and west of the Eldoma Ravine, gradually merging into the next.
- (d) *P. dardanus dardanus* from West Africa, ranging from Sierra Leone to Angola and Uganda.
- (e) *P. dardanus antinorii* from Abyssinia and Somaliland.

Herr Suffert's *Papilio boosi*, *Iris* xvii. p. 89. t. 1. f. 2 (♂) (1904) is the same as *polytrophus*. The specimen is certainly not from Dar-es-Salaam, where *P. dardanus tibullus* is found, but came doubtless from the hills above Nairobi, in British East Africa, whence Herr Suffert has also received Lepidoptera, according to his paper.

* *Nor. Zool.* xi. p. 488 (1903). This very interesting subspecies is not mentioned by Trimen in his account of the forms of *dardanus* (all treated as different "species," in spite of the intergradations) ; see *Trans. Ent. Soc. Lond.* p. 691 (December 1904).

107. *Papilio nireus pseudonireus*.

Papilio pseudonireus Felder, *Reise Novara, Lep.* p. 94 (1865) (Bogos, Abyssinia).

Papilio nireus var. A., Oberthür, *Ann. Mus. Civ. Genova* xv. p. 147. n. 3. (1879) (Shoa, July).

Papilio donaldsoni Sharpe, *Proc. Zool. Soc. Lond.* p. 537. n. 85 (1896) (Darro Mts., Somaliland) ; Auriv., *l.c.* p. 475. n. 37 (1899).

Papilio nireus var. (ab.?) *pseudonireus*, Aurivillius, *l.c.* p. 476. sub n. 38 (1899) (partim).

Papilio nireus, var. *abyssinica*, nov. spec. ! Cannaviello, *Misc. Ent.* x. p. 2 (1902) (Eritrea).

Papilio nireus, Pagenstecher, *l.c.* p. 191. n. 4 (1903) (synonymy, literature, and localities excluded ; Mane R., 26. iii. 01).

7 ♂♂ from : Gillet Mts., Somaliland, 1900—2200 m., 29. vi., 1. vii. 1900, Walenso, Gillet Mts., 2000 m., 8. vii. 1900 ; Habela to Alata, Sidamo, 12. xii. 1900.

Butler identified as *pseudonireus* quite a different insect (*Proc. Zool. Soc.* 1895, p. 633) and thus misled Miss Sharpe to redescribe the present *Papilio* as a new species.

The specimen from the Mane River mentioned by Pagenstecher as aberration belongs to *pseudonireus*. Pagenstecher in 1903 follows Oberthür, who in 1879 called *pseudonireus* an aberration of *nireus*. However, the Abyssinian specimens identified by Oberthür as true *nireus* are the same as what Pagenstecher gives as *bromius* in his list of the butterflies caught during Baron Erlanger's expedition, and are neither Linné's *nireus* nor Doubleday's *bromius* (nor Godman's *brontes*), but belong to a conspicuously different form of *Papilio*, not found outside Abyssinia and Somaliland (see below, *Papilio aethiops*).

P. nir. pseudonireus differs from the other forms of *nireus* in the blue band of the forewing being more or less reduced. The band is sometimes not narrower than it is in exceptionally narrow-banded West and East African specimens of *P. nir. nireus* and *P. nir. lycus*, but the blue spots in the cell of the forewing situated respectively at the upper and near the lower angle of the cell are always smaller in *pseudonireus* than in *lycus* and *nireus*. In none of the seven ♂♂ are the spots situated between the costal margin and R³ of the forewing completely lost, though in one of the examples they are represented only by a few blue scales. Among a series of specimens from Salomona, Eritrea, collected by Schrader in November and December 1897, there are individuals with very strongly reduced median band to the forewing, one of the specimens having no other remnant of the band than three tiny dots between M² and the hinder margin. Every specimen has at least some blue submarginal dots on the upperside of the forewing, these dots being either contiguous with the white marginal spots, or standing separate; they are in pairs, and are in some of Schrader's Salomona specimens very conspicuous, assuming occasionally a creamy colour. The greyish cloudy scaling so often found in South African specimens of *nireus lycus* on the under surface near the apex of the forewing and proximally of the middle of the hindwing is indicated in Neumann's Sidamo individual, and quite distinct in some of Schrader's Salomona examples.

There are apparently no constant differences in the sexual armature of the three subspecies of *P. nireus*. The clasper is triangular. The harpe consists of a longitudinal and a vertical process. The longitudinal one is an elongate flattened piece of chitin, which lies flat on the clasper, reaching to the end of the latter. It is dentate at the apex. The vertical process is a proximal dilatation of the upper edge of the longitudinal one. Its upper edge is either truncate or sinuate, and more or less densely dentate, seldom simple. The distal angle of this ridge-like process is often produced distad. In *pseudonireus* the longitudinal process is a little more

tapering than in the Western and Eastern subspecies, and the upper edge of the vertical ridge is more or less straight (apart from the teeth). The vertical process is rather obviously variable in *nireus nireus* as well as in *nireus lyaeus*. In our two specimens from near Bandawe, Lake Nyassa, it is serrate, but not denticulate. In West African specimens it is often strongly produced distad, while in individuals of *lyaeus* from British East Africa it is not rarely narrow and truncate.

The three Continental subspecies of *P. nireus* are distributed as follows :

a. P. nireus nireus.

Papilio Eques nireus Linné, *Syst. Nat.* ed. x. p. 464. n. 38 (1758) (♀, Ind.!).

Sierra Leone to Central Angola, eastwards to the Nandi country, Kavirondo, probably extending to the Eldoma Ravine.

Most of the Congo specimens are large.

b. P. nireus lyaeus.

Papilio lyaeus Doubleday, *Ann. Mag. N. H.* xvi. p. 176 (1845) (Afr. austr.).

Papilio lyaeus aelyus Suffert, *Iris* xvii. p. 98 (1904) (German E. Afr.).*

Cape Colony to Southern Angola, northward to the Kikuyu Escarpment, British East Africa, east of the Eldoma Ravine.—Mt. Kenia comes doubtless in the range of this form; we have not seen specimens from there.

The differences on which Suffert relies in the description of *aelyus* are purely individual.

c. P. nireus pseudonireus.

Papilio pseudonireus Felder, *l.c.*

The mountainous regions of Northern Somaliland, northwards to Eritrea.

The ♂ of *nireus* differs constantly from that of *bromius* in the claspers being triangular, as already pointed out by Doubleday in 1845. The vaginal armature of the ♀ is also conspicuously different in the two species, the antevaginal, strongly chitinised, ridge being in *brontes* mesially produced into a denticulate lobe and laterally armed with one long tooth, while the ridge is simple and mesially sinuate in *nireus*. With both species is mixed up in collections a third, of which we know as yet only the ♂. We have described it as *Papilio sosia* in *Nov. Zool.* x. p. 488 (1903).

* *Papilio chrapkowskii* Suffert, *l.c.* t. 2. f. 2 (♂) (Nairobi) is a form of *P. bromius*. We have sixty odd specimens of this form, which, though completely intergrading with *brontes* and *bromius*, must be kept separate as a geographical race confined to the Ravine districts of British East Africa.

Papilio phorcas tippelskirchi Suffert, *l.c.* p. 96. t. 1. f. 1 is the same as *phorcas ansorgei*, described from the same district in *Nov. Zool.* iii. p. 324 (1896). The insect is common in the hills east and west of the Ravine. The "subspecies" named by Herr Suffert in *Iris* xvii., *Papilio dardanus heimsi*, *d. benio*, *P. cenea maculatus*, *c. discopunctatus*, *c. sabuani*, *c. acer*, *P. celerioides rileschi*, *P. cynorta noreyta*, *P. zenobia nobiaca*, *P. cypraxifila filoprae*, *c. praxeyola*, *P. hesperus maculatissimus*, *P. mackinnoni immaculatus*, *m. bimaculatus*, *P. demodocus docusdemo*, *d. albicans*, *P. ophidocephalus phalusea*, *P. pylades lapides*, *P. cyrnuus nuseyru*, *P. aculegon legounea*, *P. agamedes medesaga*, *P. policeses liponessa* and *P. colonna lonrona* are not geographical forms, but individual aberrations. The number of such individual aberrations can be augmented to any extent, because no two individuals are actually identical. The great difficulty in the naming of individual forms is the question where to stop. The number of geographical races, on the contrary, is always limited.

Papilio moebii Suffert appears to be a narrow-banded specimen of *hachei*.

108. *Papilio aethiops* spec. nov.

Papilio nireus, Oberthür (non Linné, 1758). *Ann. Mus. Civ. Genova*, xv. p. 117. n. 3 (1879) (Shoa, vi. vii.; var. A. excl.).

(?) *Papilio pseudonireus*, Sharpe (non Felder, 1865). *Proc. Zool. Soc. Lond.* p. 528. n. 67 (1896) (Somaliland).

Papilio brontes, ead. (non Godman, 1885), *l.c.* p. 537. n. 84 (1896) (Somaliland).

Papilio nireus var. *lycaeus*, Aurivillius (non Doubleday, 1845), *l.c.* p. 476. sub n. 38 (1899) (partim; Abyssinia); Pagenst., *l.c.* p. 191. n. 4 (1903) (partim).

Papilio bromius var. *brontes*, Auriv., *l.c.* p. 476. sub n. 39 (1899) (partim; Somaliland); Pagenst., *l.c.* p. 191. n. 5 (1903) (litter. and syn. excl.).

♂. Greenish blue band of *upperside* of the forewing as broad as in *P. bromius brontes*, but much more irregular, not widening behind, incised externally at the veins, patch M^1-M^2 convex distally, longer than patch M^2-SM^2 ; patches within cell large, the hinder one with longer upper edge than in *brontes*, the proximal edge of the patch standing mostly at a right angle to the vein; no greenish blue submarginal dots; creamy fringe-spots distinct.—Hindwing: band narrower than in *brontes*, base of cellule M^1-M^2 black, streak $M^2-(SM^1)$ short and narrow; tail much more projecting than in *nireus* and *bromius*, at least twice as long as in those species.

Underside as in *brontes*; but the hindwing bears more or less indistinct traces of pale discal halfmoons (the last spot of this series is the white spot standing near the abdominal margin proximally of the end of SM^2), and the yellowish white postdiscal spots of the same wing not interrupted at the internervular folds, except the last ones.

Clasper less obtuse than in *bromius*, much less triangular than in *nireus*; a fold extends from the apical angle proximad in between the two processes of the harpe. Harpe very different from those of the allied species: it has two processes, one elongate-triangular, large, with the upper edge densely denticulate; the other short, conical, projecting from the lower side of the first near its base.

♀. Differs from *brontes* in a similar way as the ♂. On the underside of the hindwing there is a series of pale bars on the disc between the greyish postdiscal band and the grey central area; these bars are most distinct between R^1 and M^1 , and form the distal border of the brown discal band; bars R^2-M^1 curved, the brown patches at their proximal side small, triangular.

Vaginal armature: antevaginal ridge not concealing the vaginal cavity, being deeply and broadly sinuate in middle; laterally produced into a rather large tooth-like projection.

A long series from: Gara Mulata, near Harar, 27. iii. 1900; Gillet Mts., 1900—2200 m., 29. vi. and 1 & 4. vii. 1900; Badatino to Abuje, Shoa, 28. ix. 1900; Abnje, Shoa, 29. xi. 1900; Lake Abassi, 4. xii. 1900; Koritsha to Tomata, Dara R., Gudji, 24. xii. 1900; Wori to Gamitscha, Kaffa, 5. iii. 1901, *type*; Gamitscha to Anderatscha, Kaffa, 6. iii. 1901; Anderatscha, Kaffa, 7—19. iii. 1901; Budda, Gimirra, 17. iv. 1901.

We have also specimens from Walenso, Gillet Mts., and from Feleklek and other places in Shoa.

Apparently as common in Ethiopia and Northern Somaliland as is *bromius* in other parts of Africa.

In two of our individuals the white postdiscal spots of the underside of the hindwing are shaded over with brown, not contrasting much with the rest of

the wing, reminding one of the Malgassic *Papilio oribazus*. Since *aethiops* differs from *bromius* more than this does from *niveus*, which two insects are certainly specifically distinct from one another, we must treat *aethiops* also as distinct. In structure *aethiops* stands wider off from *bromius* than does *oribazus*.

109. *Papilio similis umanus* subsp. nov.

(?) *Papilio leonidas* Fabr., var. *brasidas*, Pagenstecher (*non* Felder, 1864), *l.c.* p. 191. n. 7 (1903).

♂. Upper dirty white line of abdomen thinner than the black line below it. Pale spots of basal half of hindwing reduced, the white spot C—SC² in front of cell only 4 mm. long on upperside, somewhat larger below; cell-patch obliquely truncate, extending posteriorly very little beyond point of origin of M², rather more than the apical third of cell being black, the cell-patch smaller below than above; no spot at base of cellule M¹—M²; white streak behind cell narrow and short on underside, not reaching M²; red colour at base of wings, below, reduced.

One ♂ found between Dalba to the Uma River, Konta, 28. ii. 1901.

The specimen recorded as *brasidas* by Pagenstecher, *loc. cit.*, captured at Arbarout by Baron Erlanger, may belong to the same subspecies; we have not seen it. The second specimen recorded in the same list, also as *brasidas*, from Mombasa, 27. vii. 1901, is perhaps the individual of a species of *Papilio* contained in Baron Erlanger's collection labelled "Mombasa, 27. viii. 1901." This individual is neither *similis* nor *brasidas*, but the very distinct *Papilio philonö*, not mentioned in Pagenstecher's list.

Papilio similis brasidas from South Africa is conspicuously different in most individuals from *P. similis similis*, but some specimens come close to the latter.

We cannot find any constant difference between tropical West and East African specimens of *similis*. The form *interniplaga* seems to us to be based on an aberrant individual. We have no specimen of this aberration.

P. pelopidas, described by Oberthür with some doubt as a variety of *similis* (= *leonidas*), is a distinct species. We have a pair of it from Pemba I. collected by Mr. E. Morland.

Papilio peculiaris Neave, *Nor. Zool.* xi. p. 342. n. 28. t. 1. fig. 7 (Entebbe)* is the Uganda form of *P. cynorta*. The ♂♂ which we have from Entebbe do not differ constantly from West African specimens.

* As Mr. Neave had to leave for Africa when the paper above quoted was being printed, the proof-reading was done rather hurriedly, and consequently a number of misprints were unfortunately not corrected. In the present case the new *Papilio* is named *P. gallienus peculiaris*, though the insect was known not to be a form of *gallienus*.